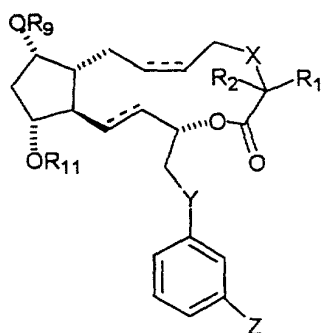


**WHAT IS CLAIMED IS:**

1. A compound of the general formula:

**Formula I**

wherein X is O, S, NH or CH<sub>2</sub>;

5  $R_1$  and  $R_2$  are the same and are either H, CH<sub>3</sub> or F;

$R_9$  is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

$R_{11}$  is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

represents any combination of a single bond, or a cis or trans double bond;

Z is H, Cl, Br, I, CF<sub>3</sub>, CH<sub>3</sub>, or C<sub>1</sub>-C<sub>10</sub> straight chain or branched alkyl;

10 Y is O, S, NH or CH<sub>2</sub>.

2. The compound of claim 1 wherein  $R_9$  and  $R_{11}$  are H; Y is O, S, or NH; and Z is CH<sub>3</sub>.

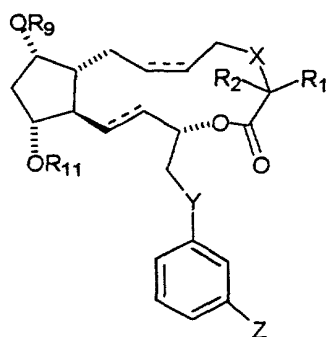
3. The compound of claim 1 wherein X is CH<sub>2</sub>;  $R_1$ ,  $R_2$  is H; Y is O; and Z is CF<sub>3</sub>.

15 4. The compound of claim 1 wherein X is CH<sub>2</sub>;  $R_1$ ,  $R_2$  is H; Y is O; and Z is Cl.

5. The compound of claim 1 wherein X is CH<sub>2</sub>;  $R_1$ ,  $R_2$  is H; Y is CH<sub>2</sub>; and Z is H.

20 6. A method of treating increased intraocular pressure in the eye of a human or animal comprising the step of:

administering a therapeutically effective amount of at least one compound of the general formula to the eye:



Formula I

wherein X is O, S, NH or CH<sub>2</sub>;

R<sub>1</sub> and R<sub>2</sub> are the same and are either H, CH<sub>3</sub> or F;

R<sub>3</sub> is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

R<sub>11</sub> is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

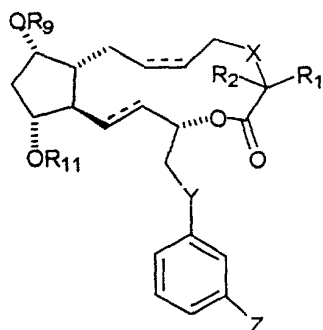
represents any combination of a single bond, or a cis or trans double bond;

Z is H, Cl, Br, I, CF<sub>3</sub>, CH<sub>3</sub>, or C<sub>1</sub>-C<sub>10</sub> straight chain or branched alkyl;

Y is O, S, NH or CH<sub>2</sub>.

7. The method of claim 6 wherein the compound is selected from the group consisting of a 1,15-lactone of fluprostenol, a 1,15-lactone of cloprostenol, and a 1,15-lactone of latanoprost.

8. A topical ophthalmic composition for treating increased intraocular pressure comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of at least one compound of the general formula:



Formula I

wherein X is O, S, NH or CH<sub>2</sub>;

R<sub>1</sub> and R<sub>2</sub> are the same and are either H, CH<sub>3</sub> or F;

R<sub>9</sub> is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

R<sub>11</sub> is H, or C<sub>1</sub>-C<sub>20</sub> straight chain, saturated or unsaturated or branched acyl;

represents any combination of a single bond, or a cis or trans double bond;

Z is H, Cl, Br, I, CF<sub>3</sub>, CH<sub>3</sub>, or C<sub>1</sub>-C<sub>10</sub> straight chain or branched alkyl;

Y is O, S, NH or CH<sub>2</sub>.

9. The topical ophthalmic composition of claim 8 wherein the compound is selected from the group consisting of a 1,15-lactone of fluprostenol, a 1,15-lactone of cloprostenol, and a 1,15-lactone of latanoprost.

10. A topical formulation for treating increased intraocular pressure comprising the following ingredients by weight percent:

	Fluprostenol 1,15-lactone	0.002
15	Dextran 70	0.1
	Hydroxypropyl Methylcellulose	0.3
	Sodium Chloride	0.77
	Potassium Chloride	0.12
	Disodium EDTA	0.05
20	Benzalkonium Chloride	0.01
	HCl and/or NaOH	to pH=7.0-7.6
	Purified water	q.s. to 100%